

**Notice of Allowability**

Application No.

10/517,527

Examiner

Felisa C. Hiteshew

Applicant(s)

SHIGEKI ET AL.

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on February 6, 2007.
2. ☒ The allowed claim(s) is/are 1-11 and 13-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

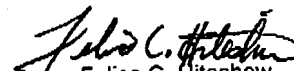
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08).  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Felisa C. Hiteshew  
Primary Examiner  
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### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the specification, on page 1, line 1, please insert the following:

--This application is a 371 of PCT/JP03/07493 06/12/2003--.

2. The following is an examiner's statement of reasons for allowance: The most relevant prior art of reference was that which was submitted by the previous office action. However, it does not teach nor fairly suggest singularly or in any combination thereof a method for producing a single crystal comprising the step of heating a crucible which holds a raw material and pulling up a seed crystal while the seed crystal is in contact with a melt of the raw material so as to produce a single crystal, wherein the crucible is heated by a high-frequency induction heater including a high-frequency coil for heating the crucible, and wherein the diameter of the single crystal is increased during formation of a taper portion of the single crystal in an initial stage of growth of the single crystal, and the single crystal is cylindrically grown connecting with the taper portion during formation of a straight body portion of the single crystal, while the radiation heat which reaches the taper portion of the single crystal from an inner surface of said crucible is blocked during the formation of the taper portion of the single crystal.

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Neither the Ikeda reference (U.S. Pat. No. 6,099,641) nor the Tomzig, et al reference (U.S. Pat. No. 5,462,011) teaches an apparatus for producing a single crystal, as stated in the instant invention, wherein the apparatus further comprises a heat conducting member which extends upwards at least from the vicinity of the upper end portion of the side wall of said crucible, which surrounds a formed single crystal. In the Ikeda reference see column 5, lines 36-67; column 6, line 6-10 and lines 48-53, respectively. In the Tomzig, et al reference, see column 3, lines 34-47 and Table 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felisa Hiteshew whose telephone number is (571) 272-1463. The examiner can normally be reached on Mondays through Thursday from 5:30 AM to 4:00 PM with Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta, can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-1463.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

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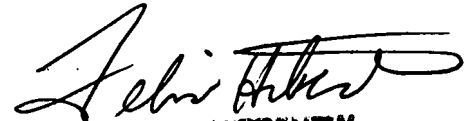
PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see

<http://pair-direct.uspto.gov>. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866- 217-9197

(toll-free).



**FELISA HITESHEW**  
**PRIMARY EXAMINER**